

# MATHEMATICS MINOR FOR SECONDARY TEACHING

Updated October 2010

The minor in Mathematics for Secondary teaching consists of a minimum of 24 credits. Candidates for certification in this minor must pass the Michigan Test for Teacher Certification (MTTC) in Secondary Mathematics (Test #22). You must demonstrate your knowledge in following categories:

| Subarea  | Approximate % of Questions on Test |
|--|------------------------------------|
| 1. Mathematical Processes & Number Concepts              | 22%                                |
| 2. Patterns, Algebraic Relations & Functions             | 28%                                |
| 3. Measurement and Geometry                              | 22%                                |
| 4. Data Analysis, Statistics, Probability, Discrete Math | 28%                                |

You may access a study guide at the MTTC testing site; the courses below have been selected so that you will be well prepared for the test.

The following chart is intended to provide you a guide for scheduling your semesters and for keeping track of your grade point average.

## CALCULUS I FOUNDATION COURSES (4 credits)

| SUBJECT/<br>COURSE   | TITLE                   | CREDIT<br>HOURS | SEMESTER | GRADE |
|--|-------------------------|-----------------|----------|-------|
| MATH 126<br>OR<br>MATH 131   | Calculus with Review II | 4               |          |       |
|  | Calculus I              | 4               |          |       |
| Prerequisite for MATH 126: MATH 125 with C- or better. (Math 125 counts as 4 credits toward graduation, but not toward the program.) |                         |                 |          |       |
| Students may earn credit for Calculus I by taking the CLEP exam.   |                         |                 |          |       |

## 100-200 LEVEL COURSES (8 credits)

| SUBJECT/<br>COURSE  | TITLE                       | CREDIT<br>HOURS | SEMESTER | GRADE |
|---|-----------------------------|-----------------|----------|-------|
| MATH 132  | Calculus II                 | 4               |          |       |
| Prerequisite for MATH 132: MATH 126 or MATH 131 with C- or better, or AP or CLEP credit for Math 131. |                             |                 |          |       |
| MATH 231  | Multivariable Mathematics I | 4               |          |       |
| Prerequisite for MATH 231: MATH 132 with C- or better.  |                             |                 |          |       |

## UPPER LEVEL REQUIRED COURSES (12 credits)

| SUBJECT/<br>COURSE  | TITLE   | CREDIT<br>HOURS | SEMESTER | GRADE |
|---|---|-----------------|----------|-------|
| MATH 280  | Bridge to Higher Mathematics                      | 3               |          |       |
| Prerequisite for MATH 280: Math 132 or High School Statistics |   |                 |          |       |
| MATH 311 &<br>MATH 312  | Statistical Methods<br>Applied Statistical Models | 2<br>2          |          |       |
| Prerequisite for MATH 311/312: Math 132                       |   |                 |          |       |
| MATH 321  | History of Math                                   | 2               |          |       |
| Prerequisite for MATH 321: Math 132                           |   |                 |          |       |
| MATH 351  | College Geometry                                  | 3               |          |       |
| Prerequisite for MATH 351: MATH 280                           |   |                 |          |       |

A METHODS COURSE - REQUIRED (3 credits) **This MUST be completed prior to the student teaching semester!** All Secondary Education students are required to take a methods course in their minor area. This does not count for the mathematics minor requirements, but rather for the Certification sequence.

| COURSE   | TITLE  | CR. HRS. | SEMESTER | GRADE |
|----------|--|----------|----------|-------|
| EDUC 323 | Teaching Mathematics in the Secondary School<br>(offered only Fall semester / odd years)                 | 2        |          |       |
| EDUC 324 | Teaching Mathematics in the Secondary School<br>Field Placement (offered only Fall semester / odd years) | 1        |          |       |